

Remarks

Reconsideration of this Application is respectfully requested. Claims 1-12 are pending.

Based on the following amendment and remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

1. Formalities

a. Priority Information

As requested by the Examiner, Applicant submits herewith an Application Data Sheet, which contains specific references to priority applications, PCT/EP2003/013340, filed October 24, 2003, and FR 0213392, filed October 25, 2002, both of which this U.S. national phase application claims priority benefits. All of this information is contained in the original Declaration filed along with the present application on August 29, 2005.

b. Amendment of the Title for Clarity

In response to the Examiner's objection of the disclosure with regard to the title, Applicant submits herewith an amendment of the title of the present application for the purpose of clarity. The amended title reads, "Process for the Preparation of 2,6-Dihalo-para-trifluoromethylaniline."

2. Claim Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 1-12 under 35 U.S.C. § 103(a) as being unpatentable over Kempf *et al.* (USPN 6,747,175) (hereinafter, "the '175 patent") in view of a reference cited as "Wikipedia, Protic Solvent, Wikipedia Foundation, Inc., July 12, 2007, pp. 1" (hereinafter, "the Wikipedia reference"). From the 2007 date of the Wikipedia reference, it appears that the Examiner is using the information contained therein as background information that would have been available to one of skill in the art at the time of filing the present application.¹ The Examiner asserts that it would have been obvious to prepare a compound of Formula I as suggested by the '175 patent, but with an aprotic polar solvent instead of the polar protic solvent disclosed therein. Specifically, the Examiner asserts that interchanging an aprotic polar solvent with a protic one would have been obvious because, 1) polar aprotic solvents and polar aprotic ones share ion dissolving power (OA, bottom of p. 6); and 2) it is general knowledge that these two types of solvents react similarly

¹ Applicant makes no admission that any information contained in the 2007 Wikipedia reference is prior art.

in substitution reactions (OA, p.7). The Examiner concludes that one skilled in the art would have been motivated to choose what the Examiner refers to as “art recognized alternative solvents.” (OA, pp. 7-8).

Applicant respectfully submits that the reasoning given in the Office Action with regard to the interchangeability of a polar protic solvent and an apolar protic solvent is overreaching. Accordingly, as explained below, the Examiner has not established a reasonable expectation of success, which is a basic criterion of establishing a *prima facie* case of obviousness. See M.P.E.P. 2143.

As a preliminary matter, the present claims as written are directed to a process that utilizes a polar aprotic solvent, which by this term’s plain and ordinary meaning would not include a polar protic solvent such as hydrogen fluoride. Applicant notes that the present specification offers no indication that the term is to be used inconsistent from its plain and ordinary meaning.

In one aspect, the reasoning given in the Office Action for interchanging a polar aprotic solvent for a polar protic one is based on the general statement in the Wikipedia reference that recites, “[p]olar aprotic solvents are solvents that share ion dissolving power with protic solvents.” (OA, p. 6). Applicant respectfully submits that the Examiner has not given any technical reason as to why ion dissolving power is significant, or even relevant at all, to one of ordinary skill in the art when considering the ‘175 patent’s process for chlorinating aniline. In fact, the point taken from the ‘175 patent’s teaching is that the chlorine/fluorine exchange *must* occur in a hydrogen fluoride medium. See, e.g., col. 1, lines 50-55 (“exchange in a hydrofluoric acid medium... ”); col. 2, lines 1-3 (“reaction being carried out in a hydrofluoric acid medium.... ”); and all of the claims. Moreover, the veracity of the Wikipedia reference’s statement is arguable because due to hydrogen-bonding, polar protic solvents are capable of solvating negative ions (anions), but polar aprotic solvents, which by definition lack hydrogen-bonding capability, cannot. In sum, there is no evidence that a skilled artisan would look specifically to the ion dissolving power of a potential solvent when contemplating the claimed process.

In another aspect, the reasoning given in the Office Action for interchanging a polar protic solvent for a polar aprotic one is based on official notice that, “it is known in the art that protic solvents and aprotic solvents of high polarity react similarly in substitution reactions.” (OA, p. 7). Applicant respectfully traverses this factual assertion because it is too broad to be accepted as well-known, much less accepted as being applicable in this case. The

Examiner may take official note of facts outside the record in cases where the asserted facts are capable of instant and unquestionable demonstration as being well known. *In re Ahlert*, 424 F.2d 1088, 1091 (Fed Cir 2004). In the present case, the Wikipedia reference itself discloses at least one dissimilarity between a polar protic solvent and a polar aprotic one *specifically in substitution reactions*: “Polar protic solvents are favorable for S_N1 reactions, while polar aprotic solvents are favorable for S_N2 reactions.” (Last paragraph). Moreover, the generality of the official notice does not provide any technical reason at all why hydrogen fluoride, which is ubiquitous in the ‘175 patent’s process, could be successfully interchanged with a different solvent, let alone a polar aprotic one. The Examiner only states, “it is reasonable to assume that a polar aprotic solvent would yield positive results....” (OA, p, 7). In view of the Wikipedia reference itself, and in the absence of any supporting evidence whatsoever, the Examiner’s statement appears to merely be a convenient assumption.

At the very least, in view of the given reasoning discussed above, the general technical teachings of the references themselves, and in particular view of the ‘175 patent’s method, there would have been no reasonable expectation of success in removing hydrogen fluoride from the reaction or substituting it with any other solvent. For at least this reason, the Examiner has failed to establish a case of *prima facie* obviousness.

Finally, the Examiner states that one motivation for interchanging a polar protic solvent for a polar aprotic one is that they are “art recognized alternative solvents.” (OA, p. 8). Applicant respectfully traverses this factual assertion because it is not properly based upon common knowledge. *Ahlert*, 424 F.2d at 1091. The solvents are from two chemically distinct classes, and the cited Wikipedia reference clearly details that the solvents behave differently even among substitution reactions. Moreover, the assertions discussed in the preceding paragraphs that the solvents “react similarly” and “share ion dissolving power” are too general or questionable even within the cited art to provide factual support that the solvents are in fact recognized equivalents in any of the processes described herein. This is particularly evident because no other supporting documentary evidence or unquestionable technical explanation has been proffered that can be taken as common knowledge of equivalence. Thus, Applicant respectfully submits that the factual assertion is merely a conclusory statement and requests that the Examiner remove the rejection or provide documentary evidence showing that the solvents would be considered equivalents in the presently claimed process.

In view of the above arguments, Applicant respectfully submits that the rejection of claim 1 and each of its dependent claims 2-12 has been overcome. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-12 under 35 U.S.C. § 103, and allow each of these claims.


Conclusion

Reexamination of the application and reconsideration of the rejection is respectfully requested. If any questions remain, the Examiner is invited to contact the undersigned at the number given below.

Respectfully submitted,

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